



Figure S1. Effects of Hmgpi-rescue in Chd1-knockdown embryos on Klf5 expression.

(A) qRT-PCR of Klf5 mRNA in control, Chd1-knockdown, and Chd1-knockdown-Hmgpi-rescue embryos from the late 2-cell to the blastocyst stages ($*P < 0.05$). The expression levels were normalized to H2afz, used as an internal control. The mRNA levels of the late 2-cell control embryos were defined as 1. Data are expressed as means \pm s.e.m. ($n=3$). (B) Immunostaining of KLF5 protein in control, Chd1-knockdown, and Chd1-knockdown-Hmgpi-rescue embryos (green, KLF5; blue, chromatin).

Representative images of embryos at each stage are shown. Between 20 and 50 embryos were used in each experiment ($n=3$): in total, 60, 71, 68 and 95 control embryos, 60, 82, 103 and 113 Chd1-knockdown embryos, and 60, 76, 96 and 103 Chd1-knockdown-Hmgpi-rescue embryos each for late 2-cell, 4-cell, 8-cell, morula and blastocyst, respectively.

Table S1. Primers used for qRT-PCR

Genes	GeneBank Accession Number.	Forward	Reverse
<i>Chd1</i>	NM_007690.3	aagtcgacggagccgagt	cattgcagatctctggacagc
<i>Pou5f1</i>	NM_001252452.1	atggggaagaagctcagtg	caaatgatgagtgacagacagg
<i>Nanog</i>	NM_001289828.1	ttcttgctacaagggtctgc	agaggaagggcgaggaga
<i>Cdx2</i>	NM_007673.3	agctgctgtaggcggaatgtatg	tcagtgactcgaacagcagcaa
<i>Hmgpi</i>	NM_001033793.3	gtgggagttggactatggac	tgaactgattggacacacaca
<i>Klf5</i>	NM_009769.4	agcctggaagtccgataga	attgtagcggcataggacgg
<i>H2afz</i>	NM_016750.3	tccagtggactgtatctctgtga	gactcgaatgcagaaatttgg

Table S2. Primers used for *Hmgpi* cloning

Gene	Forward	Reverse
<i>Hmgpi</i> cloning	gggaccggtaatacactcactataggggttgcactaatgacatcac	gggggatccttaatcatcttcatctgtac